AI-Powered Intelligence for the Waste Management Industry

Decision Intelligence Across Liquid Waste · Food Waste · Material Recovery · Hazardous Waste

About Espalier.ai

Espalier.ai is an enterprise AI company that powers consequential decisions for corporations, private equity firms, investment banks, and professional services firms operating in complex B2B environmental services markets. The platform combines web-scale intelligence extraction, AI-driven signal detection, and decision-ready analytics to surface high-value opportunities across the full spectrum of waste management segments.

Powered by a fusion of Large Language Models (LLM), knowledge graphs, machine learning, and domain ontologies, Espalier delivers clarity, speed, and conviction to the most important strategic decisions in the waste industry — from growth planning and M&A to ESG compliance and sustainability strategy.

89K+	1,200+	160+	131K
Liquid Waste Service Providers	Material Recovery Facilities	Regulatory Frameworks Tracked	PFAS/Haz Waste Facilities

Why Espalier.ai for Waste Management Analytics?

The U.S. environmental services sector is undergoing rapid transformation driven by regulatory pressure, sustainability mandates, and infrastructure modernization. Espalier.ai provides operators, investors, and policymakers with a decisive intelligence edge across four critical waste categories:

- **Liquid Waste Management**
- **Food Waste & Organics Recovery**
- **Material Recovery Facilities (MRFs)**
- **Hazardous Waste (Haz Waste) Services**

Learn more: espalier.ai/waste-management-industry-analytics

Liquid Waste Management & Food Waste Recovery

Liquid Waste Management

Liquid waste encompasses a broad spectrum of non-solid waste streams including grease trap waste, septic tank effluent, industrial wastewater, and portable sanitation materials. Espalier.ai's **Liquid Waste Management Intelligence** platform provides unrivalled granularity across the U.S. market:

- **89,000+ service providers** profiled with capacity and routing data
- **149,000+ restaurants** and commercial kitchens mapped as grease trap generators
- Route economics optimization to maximize collection efficiency
- Regulatory compliance mapping across 160+ state and federal frameworks
- Competitive landscape benchmarking for M&A and market entry

Whether you're a liquid waste hauler planning route expansion, a private equity firm evaluating an acquisition target, or a municipality assessing service gaps, Espalier.ai's liquid waste module transforms raw operational data into strategic clarity.

espalier.ai/liquid-waste-management-industry-us

Food Waste & Organics Recovery

Food waste represents one of the fastest-growing and most complex segments in environmental services. With over 80 million tons of food discarded annually in the U.S., the organics recovery sector is under enormous pressure to scale solutions — from anaerobic digestion and composting to food rescue and biogas generation.

- Generator mapping: restaurants, institutions, food processors
- Composting and anaerobic digestion facility intelligence
- Policy and subsidy tracking at state and municipal levels
- Diversion rate benchmarking by geography and sector
- ESG scoring and sustainability reporting support

Espalier.ai enables food waste solution providers, investors, and municipalities to identify high-density organics generation zones, evaluate infrastructure gaps, and build evidence-based expansion roadmaps that align with circular economy mandates.

espalier.ai/sustainability

Key Use Cases — Liquid & Organics

Use Case	Waste Type	Espalier.ai Solution
Route Optimization	Liquid Waste	Generator density mapping + route economics
M&A Target Screening	Liquid Waste / Food Waste	Market share, revenue estimation, deal comps
Regulatory Compliance	Food Waste	State mandate tracking, diversion reporting
Sustainability Strategy	Food Waste / Organics	ESG gap analysis, circular economy planning
Market Entry Planning	Liquid Waste	Competitive white-space analysis by region

Material Recovery Facilities (MRFs) & Hazardous Waste Management

Material Recovery Facilities (MRFs)

Material Recovery Facilities are the backbone of the U.S. recycling infrastructure, processing commingled recyclables from municipal, commercial, and industrial waste streams. Espalier.ai's **MRF Intelligence Platform** provides the most comprehensive dataset available for the 1,200+ active MRF operations across the country.

MRF Intelligence Category	Data Points Available
Facility Type	Single-stream, dual-stream, source-separated, mixed-waste
Material Streams	Paper, plastics, metals, glass, e-waste, textiles
Throughput Capacity	Tons per day, annual processing volume
Customer Segments	Municipal, C&I, special waste contracts
Technology Profile	Sort lines, optical sorters, AI robotics
Geographic Coverage	State, county, MSA-level mapping
ESG Metrics	Diversion rates, contamination rates, landfill avoidance

Espalier.ai empowers recycling operators, municipalities, and circular economy investors to identify capacity gaps, evaluate acquisition targets, benchmark performance, and navigate the increasingly complex commodity markets that drive MRF economics.

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Hazardous Waste Management

Hazardous waste management is one of the most regulated and high-stakes segments in environmental services. From RCRA-regulated industrial wastes to PFAS contamination and pharmaceutical disposal, the compliance landscape is increasingly complex and the liability is real.

Haz Waste Intelligence Capabilities

- **131,000+ facilities** tracked for PFAS/hazardous exposure
- RCRA generator classification (LQG, SQG, VSQG)
- Treatment, Storage & Disposal Facility (TSDF) mapping
- Contamination source attribution and plume modeling data
- Regulatory enforcement history and violation tracking
- Remediation technology and vendor intelligence
- Risk scoring for M&A due diligence and insurance underwriting

Who Uses Haz Waste Analytics?

Solution Providers use Espalier.ai to identify high-risk generator clusters and prioritize outreach for collection contracts and remediation projects.

Private Equity & Investment Banks rely on Espalier.ai for commercial due diligence on environmental services M&A, including liability screening and market sizing.

Infrastructure Planners use our data to site new TSDF capacity, model remediation cost scenarios, and support public financing decisions.

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The Espalier Platform & Strategic Advantage

How the Espalier Platform Works

Espalier.ai operates on a three-tiered intelligence architecture that transforms fragmented web-scale data into decision-grade strategic intelligence:

Tier 1	**Web-Scale Data Extraction**	Continuous ingestion of permits, regulatory filings, news, job postings, contracts, and operational data from thousands of sources.
Tier 2	**AI-Driven Signal Detection**	LLMs and knowledge graphs identify patterns, competitive signals, M&A intent, and emerging regulatory risks across all four waste verticals.
Tier 3	**Decision-Ready Analytics**	Contextualized dashboards, API feeds, and consulting deliverables built for strategic, financial, and operational decision-making.

Solutions Across the Waste Management Value Chain

Solution Area	Description	Relevant Waste Types
Growth Strategy	Market sizing, white-space analysis, segment prioritization	All four segments
M&A Intelligence	Deal sourcing, commercial due diligence, asset profiling	Liquid, Haz Waste, MRF
Route Economics	Density mapping, haul optimization, margin analysis	Liquid Waste, Food Waste
ESG & Sustainability	Diversion tracking, carbon accounting, reporting	Food Waste, MRF
Regulatory Intelligence	Compliance monitoring, enforcement risk, policy tracking	Haz Waste, Liquid Waste

Ready to Transform Your Waste Management Strategy?

Explore AI-powered intelligence for Liquid Waste, Food Waste, Material Recovery, and Hazardous Waste.

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